

**REMARKS**

Reconsideration and allowance in view of the foregoing amendments and the following remarks is respectfully requested. This Amendment is Supplemental to an amendment filed on March 10, 2009 and should be entered.

Claims 2 and 4-15 remain pending in the application. Claims 8-10 have been rewritten in independent form. Claims 13-14 and 15 have been amended. Claims 1, 3 and 16 have been canceled by previous Amendment. Claims 17-18 are now canceled without prejudice and disclaimer.

Claims 2, 4-6, 8 and 9 are rejected under 35 USC §103(a) as being unpatentable over Laamanen et al. (WO/98/58471) in view of Wright et al. (US 6,704,297) (hereafter Wright). Applicants respectfully traverse this rejection for the reasons discussed below.

Regarding claim 2, both Laamanen and Wright as applied by the Examiner, do not disclose or suggest a method of modulating a digital signal of width  $L$  in frequency on a given useful frequency band wherein the predetermined minimum distance between the channels is determined as a function of the number  $N$  of channels, of their width  $I_n$ , and of a mean width of the frequency band affected by the phenomenon of flat fading.

The Examiner concedes that Laamanen does not explicitly disclose that the predetermined minimum distance between the channels is determined as a function of a mean width of the frequency band affected by the phenomenon of flat fading.

Further, Wright does not disclose or suggest that the minimum distance between the channels of its FDMA technique are calculated on the basis of the width of the frequency band affected by the phenomenon of flat fading. Wright appears to disclose dividing frequency into sub-band by using FDMA, and is silent on the claimed features above. Thus, Applicants do not agree with the Examiner's position that it would have

been seen as obvious in view of Wright for one of ordinary skill in the art to calculate a minimum distance between the channels based on the frequency band affected by the phenomenon of flat fading in order to affect a minority of channels. (See, page 6, lines 4-17 of the specification).

Furthermore, in response to the Examiner's argument that "it is well known to one of ordinary skill in the art that to avoid interference or to keep orthogonality during transmission, system must calculate the distance between the sub carriers", Applicants submit that the problem of avoiding interference between the sub carriers is different from the problem solved by the present application, e.g., avoiding that a too large number of channels is affected by flat fading.

Although narrowing some of the sub bands in a multi-carrier system in order to separate them by distance can avoid interference between sub bands, e.g., avoid that several sub bands get superimposed due to multi-paths phenomenon, separating sub bands without taking account of the mean width of the frequency band affected by the phenomenon of flat fading will not lead to avoid that some of the sub bands are affected by flat fading which is a variation of amplitude of the signal over all its frequency components.

Accordingly, claim 2 should be patentable over the applied references and this rejection should be withdrawn.

Claims 8-9 have been rewritten in independent form and recite similar limitations to that of claim 2, therefore, claims 8-9 should be patentable for the reasons with respect to claim 2 and this rejection should be withdrawn.

Claims 13 and 14 are rejected under 35 USC §103(e) as being anticipated by Kumar et al. (US 7,046,694) (hereafter Kumar).

In response, claims 13 and 14 have been amended to recite the similar limitations of that of claim 2, and Applicants submit that Kumar fails to disclose or

suggest the limitations of claims 13-14. For at least this reason, claim 13-14 should be allowable for the reason discussed above with respect to claim 2. Accordingly, this rejection should be withdrawn.

Claims 7, 10-12, 15, 17 and 18 are rejected under 35 USC §103(a) as being unpatentable over Laamanen and Wright, as applied to claim 2 above, and further in view of Kumar et al. (US 7,046,6940) (hereafter Kumar).

Kumar does not overcome the deficiencies of Laamanen and Wright as discussed above. Claim 10 has been rewritten in independent form and recited similar limitations to that of claim 2, therefore, claim 10 should be patentable for the reasons with respect to claim 2 and this rejection should be withdrawn.

Claims 7 and 11-12, 15 depends upon claims 2 and 10, respectively, and recite additional important limitations. Accordingly, claims 7 and 11-12, 15 should be allowable for at least the reasons advanced with respect to claims 2 and 10, and this rejection should be withdrawn.

All objections and rejections having been addressed, it is respectfully submitted that the present application should be in condition for allowance and a Notice to that effect is earnestly solicited.

Early issuance of a Notice of Allowance is courteously solicited.

The Examiner is invited to telephone the undersigned, Applicant's attorney of record, to facilitate advancement of the present application.

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 07-1337 and please credit any excess fees to such deposit account.

Respectfully submitted,

**LOWE HAUPTMAN HAM & BERNER, LLP**



Kenneth M. Berner  
Registration No. 37,093

1700 Diagonal Road, Suite 300  
Alexandria, Virginia 22314  
(703) 684-1111  
(703) 518-5499 Facsimile  
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